RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/554,561_

Source: _PCT/10_

Date Processed by STIC: _11/3/05_

ENTERED

PCT

RAW SEQUENCE LISTING   DATE: 11/03/2005
PATENT APPLICATION: US/10/554,561   TIME: 08:31:03

Input Set : A:\082368-006600US.txt
Output Set: N:\CRF4\11032005\J554561.raw

```
      4 <110> APPLICANT: Ebina, Yousuke
      5        Obata, Toshiyuki
      6        Okamoto, Eiji
      8 <120> TITLE OF INVENTION: METHODS FOR MEASURING THE INSULIN
      9        RECEPTOR ALPHA SUBUNIT
     11 <130> FILE REFERENCE: 082368-006600US
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/554,561
C--> 13 <141> CURRENT FILING DATE: 2005-10-25
     13 <150> PRIOR APPLICATION NUMBER: PCT/JP2004/005412
     14 <151> PRIOR FILING DATE: 2004-04-15
     16 <150> PRIOR APPLICATION NUMBER: JP 2003-121955
     17 <151> PRIOR FILING DATE: 2003-04-25
     19 <150> PRIOR APPLICATION NUMBER: JP 2003-433303
     20 <151> PRIOR FILING DATE: 2003-12-26
     22 <160> NUMBER OF SEQ ID NOS: 2
     24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     26 <210> SEQ ID NO: 1
     27 <211> LENGTH: 2859
     28 <212> TYPE: DNA
     29 <213> ORGANISM: Homo sapiens
     31 <220> FEATURE:
     32 <221> NAME/KEY: sig_peptide
     33 <222> LOCATION: (1)...(81)
     35 <221> NAME/KEY: CDS
     36 <222> LOCATION: (1)...(2859)
W--> 38 <221> mat_peptide
     39 <222> LOCATION: (82)...(926)
W--> 41 <400> 1
     42 atg ggc acc ggg ggc cgg cgg ggg gcg gcg gcc gcg ccg ctg ctg gtg    48
     43 Met Gly Thr Gly Gly Arg Arg Gly Ala Ala Ala Ala Pro Leu Leu Val
     44         -25                 -20                 -15
     46 gcg gtg gcc gcg ctg cta ctg ggc gcc gcg ggc cac ctg tac ccc gga    96
     47 Ala Val Ala Ala Leu Leu Leu Gly Ala Ala Gly His Leu Tyr Pro Gly
     48      -10                  -5                   1                5
     50 gag gtg tgt ccc ggc atg gat atc cgg aac aac ctc act agg ttg cat   144
     51 Glu Val Cys Pro Gly Met Asp Ile Arg Asn Asn Leu Thr Arg Leu His
     52                 10                  15                  20
     54 gag ctg gag aat tgc tct gtc atc gaa gga cac ttg cag ata ctc ttg   192
     55 Glu Leu Glu Asn Cys Ser Val Ile Glu Gly His Leu Gln Ile Leu Leu
     56             25                  30                  35
     58 atg ttc aaa acg agg ccc gaa gat ttc cga gac ctc agt ttc ccc aaa   240
     59 Met Phe Lys Thr Arg Pro Glu Asp Phe Arg Asp Leu Ser Phe Pro Lys
     60             40                  45                  50
```

RAW SEQUENCE LISTING   DATE: 11/03/2005
PATENT APPLICATION: US/10/554,561   TIME: 08:31:03

Input Set : A:\082368-006600US.txt
Output Set: N:\CRF4\11032005\J554561.raw

```
62 ctc atc atg atc act gat tac ttg ctg ctc ttc cgg gtc tat ggg ctc   288
63 Leu Ile Met Ile Thr Asp Tyr Leu Leu Leu Phe Arg Val Tyr Gly Leu
64     55                  60                  65
66 gag agc ctg aag gac ctg ttc ccc aac ctc acg gtc atc cgg gga tca   336
67 Glu Ser Leu Lys Asp Leu Phe Pro Asn Leu Thr Val Ile Arg Gly Ser
68 70                  75                  80                  85
70 cga ctg ttc ttt aac tac gcg ctg gtc atc ttc gag atg gtt cac ctc   384
71 Arg Leu Phe Phe Asn Tyr Ala Leu Val Ile Phe Glu Met Val His Leu
72                 90                  95                 100
74 aag gaa ctc ggc ctc tac aac ctg atg aac atc acc cgg ggt tct gtc   432
75 Lys Glu Leu Gly Leu Tyr Asn Leu Met Asn Ile Thr Arg Gly Ser Val
76                 105                 110                 115
78 cgc atc gag aag aac aat gag ctc tgt tac ttg gcc act atc gac tgg   480
79 Arg Ile Glu Lys Asn Asn Glu Leu Cys Tyr Leu Ala Thr Ile Asp Trp
80                 120                 125                 130
82 tcc cgt atc ctg gat tcc gtg gag gat aat cac atc gtg ttg aac aaa   528
83 Ser Arg Ile Leu Asp Ser Val Glu Asp Asn His Ile Val Leu Asn Lys
84     135                 140                 145
86 gat gac aac gag gag tgt gga gac atc tgt ccg ggt acc gcg aag ggc   576
87 Asp Asp Asn Glu Glu Cys Gly Asp Ile Cys Pro Gly Thr Ala Lys Gly
88 150                 155                 160                 165
90 aag acc aac tgc ccc gcc acc gtc atc aac ggg cag ttt gtc gaa cga   624
91 Lys Thr Asn Cys Pro Ala Thr Val Ile Asn Gly Gln Phe Val Glu Arg
92                 170                 175                 180
94 tgt tgg act cat agt cac tgc cag aaa gtt tgc ccg acc atc tgt aag   672
95 Cys Trp Thr His Ser His Cys Gln Lys Val Cys Pro Thr Ile Cys Lys
96                 185                 190                 195
98 tca cac ggc tgc acc gcc gaa ggc ctc tgt tgc cac agc gag tgc ctg   720
99 Ser His Gly Cys Thr Ala Glu Gly Leu Cys Cys His Ser Glu Cys Leu
100             200                 205                 210
102 ggc aac tgt tct cag ccc gac gac ccc acc aag tgc gtg gcc tgc cgc   768
103 Gly Asn Cys Ser Gln Pro Asp Asp Pro Thr Lys Cys Val Ala Cys Arg
104     215                 220                 225
106 aac ttc tac ctg gac ggc agg tgt gtg gag acc tgc ccg ccc ccg tac   816
107 Asn Phe Tyr Leu Asp Gly Arg Cys Val Glu Thr Cys Pro Pro Pro Tyr
108 230                 235                 240                 245
110 tac cac ttc cag gac tgg cgc tgt gtg aac ttc agc ttc tgc cag gac   864
111 Tyr His Phe Gln Asp Trp Arg Cys Val Asn Phe Ser Phe Cys Gln Asp
112                 250                 255                 260
114 ctg cac cac aaa tgc aag aac tcg cgg agg cag ggc tgc cac caa tac   912
115 Leu His His Lys Cys Lys Asn Ser Arg Arg Gln Gly Cys His Gln Tyr
116             265                 270                 275
118 gtc att cac aac aac aag tgc atc cct gag tgt ccc tcc ggg tac acg   960
119 Val Ile His Asn Asn Lys Cys Ile Pro Glu Cys Pro Ser Gly Tyr Thr
120             280                 285                 290
122 atg aat tcc agc aac ttg ctg tgc acc cca tgc ctg ggt ccc tgt ccc   1008
123 Met Asn Ser Ser Asn Leu Leu Cys Thr Pro Cys Leu Gly Pro Cys Pro
124     295                 300                 305
126 aag gtg tgc cac ctc cta gaa ggc gag aag acc atc gac tcg gtg acg   1056
```

RAW SEQUENCE LISTING   DATE: 11/03/2005
PATENT APPLICATION: US/10/554,561   TIME: 08:31:03

Input Set : A:\082368-006600US.txt
Output Set: N:\CRF4\11032005\J554561.raw

```
127 Lys Val Cys His Leu Leu Glu Gly Glu Lys Thr Ile Asp Ser Val Thr
128 310             315             320             325
130 tct gcc cag gag ctc cga gga tgc acc gtc atc aac ggg agt ctg atc    1104
131 Ser Ala Gln Glu Leu Arg Gly Cys Thr Val Ile Asn Gly Ser Leu Ile
132             330             335             340
134 atc aac att cga gga ggc aac aat ctg gca gct gag cta gaa gcc aac    1152
135 Ile Asn Ile Arg Gly Gly Asn Asn Leu Ala Ala Glu Leu Glu Ala Asn
136             345             350             355
138 ctc ggc ctc att gaa gaa att tca ggg tat cta aaa atc cgc cga tcc    1200
139 Leu Gly Leu Ile Glu Glu Ile Ser Gly Tyr Leu Lys Ile Arg Arg Ser
140         360             365             370
142 tac gct ctg gtg tca ctt tcc ttc ttc cgg aag tta cgt ctg att cga    1248
143 Tyr Ala Leu Val Ser Leu Ser Phe Phe Arg Lys Leu Arg Leu Ile Arg
144         375             380             385
146 gga gag acc ttg gaa att ggg aac tac tcc ttc tat gcc ttg gac aac    1296
147 Gly Glu Thr Leu Glu Ile Gly Asn Tyr Ser Phe Tyr Ala Leu Asp Asn
148 390             395             400             405
150 cag aac cta agg cag ctc tgg gac tgg agc aaa cac aac ctc acc acc    1344
151 Gln Asn Leu Arg Gln Leu Trp Asp Trp Ser Lys His Asn Leu Thr Thr
152             410             415             420
154 act cag ggg aaa ctc ttc ttc cac tat aac ccc aaa ctc tgc ttg tca    1392
155 Thr Gln Gly Lys Leu Phe Phe His Tyr Asn Pro Lys Leu Cys Leu Ser
156             425             430             435
158 gaa atc cac aag atg gaa gaa gtt tca gga acc aag ggg cgc cag gag    1440
159 Glu Ile His Lys Met Glu Glu Val Ser Gly Thr Lys Gly Arg Gln Glu
160         440             445             450
162 aga aac gac att gcc ctg aag acc aat ggg gac aag gca tcc tgt gaa    1488
163 Arg Asn Asp Ile Ala Leu Lys Thr Asn Gly Asp Lys Ala Ser Cys Glu
164         455             460             465
166 aat gag tta ctt aaa ttt tct tac att cgg aca tct ttt gac aag atc    1536
167 Asn Glu Leu Leu Lys Phe Ser Tyr Ile Arg Thr Ser Phe Asp Lys Ile
168 470             475             480             485
170 ttg ctg aga tgg gag ccg tac tgg ccc ccc gac ttc cga gac ctc ttg    1584
171 Leu Leu Arg Trp Glu Pro Tyr Trp Pro Pro Asp Phe Arg Asp Leu Leu
172             490             495             500
174 ggg ttc atg ctg ttc tac aaa gag gcc cct tat cag aat gtg acg gag    1632
175 Gly Phe Met Leu Phe Tyr Lys Glu Ala Pro Tyr Gln Asn Val Thr Glu
176             505             510             515
178 ttc gat ggg cag gat gcg tgt ggt tcc aac agt tgg acg gtg gta gac    1680
179 Phe Asp Gly Gln Asp Ala Cys Gly Ser Asn Ser Trp Thr Val Val Asp
180         520             525             530
182 att gac cca ccc ctg agg tcc aac gac ccc aaa tca cag aac cac cca    1728
183 Ile Asp Pro Pro Leu Arg Ser Asn Asp Pro Lys Ser Gln Asn His Pro
184     535             540             545
186 ggg tgg ctg atg cgg ggt ctc aag ccc tgg acc cag tat gcc atc ttt    1776
187 Gly Trp Leu Met Arg Gly Leu Lys Pro Trp Thr Gln Tyr Ala Ile Phe
188 550             555             560             565
190 gtg aag acc ctg gtc acc ttt tcg gat gaa cgc cgg acc tat ggg gcc    1824
191 Val Lys Thr Leu Val Thr Phe Ser Asp Glu Arg Arg Thr Tyr Gly Ala
```

```
192                 570                 575                 580
194 aag agt gac atc att tat gtc cag aca gat gcc acc aac ccc tct gtg   1872
195 Lys Ser Asp Ile Ile Tyr Val Gln Thr Asp Ala Thr Asn Pro Ser Val
196                 585                 590                 595
198 ccc ctg gat cca atc tca gtg tct aac tca tca tcc cag att att ctg   1920
199 Pro Leu Asp Pro Ile Ser Val Ser Asn Ser Ser Ser Gln Ile Ile Leu
200             600                 605                 610
202 aag tgg aaa cca ccc tcc gac ccc aat ggc aac atc acc cac tac ctg   1968
203 Lys Trp Lys Pro Pro Ser Asp Pro Asn Gly Asn Ile Thr His Tyr Leu
204         615                 620                 625
206 gtt ttc tgg gag agg cag gcg gaa gac agt gag ctg ttc gag ctg gat   2016
207 Val Phe Trp Glu Arg Gln Ala Glu Asp Ser Glu Leu Phe Glu Leu Asp
208 630                 635                 640                 645
210 tat tgc ctc aaa ggg ctg aag ctg ccc tcg agg acc tgg tct cca cca   2064
211 Tyr Cys Leu Lys Gly Leu Lys Leu Pro Ser Arg Thr Trp Ser Pro Pro
212                 650                 655                 660
214 ttc gag tct gaa gat tct cag aag cac aac cag agt gag tat gag gat   2112
215 Phe Glu Ser Glu Asp Ser Gln Lys His Asn Gln Ser Glu Tyr Glu Asp
216             665                 670                 675
218 tcg gcc ggc gaa tgc tgc tcc tgt cca aag aca gac tct cag atc ctg   2160
219 Ser Ala Gly Glu Cys Cys Ser Cys Pro Lys Thr Asp Ser Gln Ile Leu
220         680                 685                 690
222 aag gag ctg gag gag tcc tcg ttt agg aag acg ttt gag gat tac ctg   2208
223 Lys Glu Leu Glu Glu Ser Ser Phe Arg Lys Thr Phe Glu Asp Tyr Leu
224         695                 700                 705
226 cac aac gtg gtt ttc gtc ccc aga aaa acc tct tca ggc act ggt gcc   2256
228 His Asn Val Val Phe Val Pro Arg Lys Thr Ser Ser Gly Thr Gly Ala
229 710                 715                 720                 725
231 gag gac cct agg cca tct cgg aaa cgc agg tcc ctt ggc gat gtt ggg   2304
232 Glu Asp Pro Arg Pro Ser Arg Lys Arg Arg Ser Leu Gly Asp Val Gly
233                 730                 735                 740
235 aat gtg acg gtg gcc gtg ccc acg gtg gca gct ttc ccc aac act tcc   2352
236 Asn Val Thr Val Ala Val Pro Thr Val Ala Ala Phe Pro Asn Thr Ser
237             745                 750                 755
239 tcg acc agc gtg ccc acg agt ccg gag gag cac agg cct ttt gag aag   2400
240 Ser Thr Ser Val Pro Thr Ser Pro Glu Glu His Arg Pro Phe Glu Lys
241         760                 765                 770
243 gtg gtg aac aag gag tcg ctg gtc atc tcc ggc ttg cga cac ttc acg   2448
244 Val Val Asn Lys Glu Ser Leu Val Ile Ser Gly Leu Arg His Phe Thr
245     775                 780                 785
247 ggc tat cgc atc gag ctg cag gct tgc aac cag gac acc cct gag gaa   2496
248 Gly Tyr Arg Ile Glu Leu Gln Ala Cys Asn Gln Asp Thr Pro Glu Glu
249 790                 795                 800                 805
251 cgg tgc agt gtg gca gcc tac gtc agt gcg agg acc atg cct gaa gcc   2544
252 Arg Cys Ser Val Ala Ala Tyr Val Ser Ala Arg Thr Met Pro Glu Ala
253             810                 815                 820
255 aag gct gat gac att gtt ggc cct gtg acg cat gaa atc ttt gag aac   2592
256 Lys Ala Asp Asp Ile Val Gly Pro Val Thr His Glu Ile Phe Glu Asn
257         825                 830                 835
```

RAW SEQUENCE LISTING   DATE: 11/03/2005
PATENT APPLICATION: US/10/554,561   TIME: 08:31:04

Input Set : A:\082368-006600US.txt
Output Set: N:\CRF4\11032005\J554561.raw

```
259 aac gtc gtc cac ttg atg tgg cag gag ccg aag gag ccc aat ggt ctg      2640
260 Asn Val Val His Leu Met Trp Gln Glu Pro Lys Glu Pro Asn Gly Leu
261         840                 845                 850
263 atc gtg ctg tat gaa gtg agt tat cgg cga tat ggt gat gag gag ctg      2688
264 Ile Val Leu Tyr Glu Val Ser Tyr Arg Arg Tyr Gly Asp Glu Glu Leu
265         855                 860                 865
267 cat ctc tgc gtc tcc cgc aag cac ttc gct ctg gaa cgg ggc tgc agg      2736
268 His Leu Cys Val Ser Arg Lys His Phe Ala Leu Glu Arg Gly Cys Arg
269 870                 875                 880                 885
271 ctg cgt ggg ctg tca ccg ggg aac tac agc gtg cga atc cgg gcc acc      2784
272 Leu Arg Gly Leu Ser Pro Gly Asn Tyr Ser Val Arg Ile Arg Ala Thr
273                 890                 895                 900
276 tcc ctt gcg ggc aac ggc tct tgg acg gaa ccc acc tat ttc tac gtg      2832
277 Ser Leu Ala Gly Asn Gly Ser Trp Thr Glu Pro Thr Tyr Phe Tyr Val
278                 905                 910                 915
280 aca gac tat tta gac gtc ccg tca aat                                  2859
281 Thr Asp Tyr Leu Asp Val Pro Ser Asn
282         920                 925
285 <210> SEQ ID NO: 2
286 <211> LENGTH: 953
287 <212> TYPE: PRT
288 <213> ORGANISM: Homo sapiens
290 <220> FEATURE:
291 <221> NAME/KEY: SIGNAL
292 <222> LOCATION: (1)...(27)
294 <400> SEQUENCE: 2
295 Met Gly Thr Gly Gly Arg Arg Gly Ala Ala Ala Ala Pro Leu Leu Val
296         -25                 -20                 -15
297 Ala Val Ala Ala Leu Leu Leu Gly Ala Ala Gly His Leu Tyr Pro Gly
298         -10                 -5                  1                   5
299 Glu Val Cys Pro Gly Met Asp Ile Arg Asn Asn Leu Thr Arg Leu His
300                 10                  15                  20
301 Glu Leu Glu Asn Cys Ser Val Ile Glu Gly His Leu Gln Ile Leu Leu
302         25                  30                  35
303 Met Phe Lys Thr Arg Pro Glu Asp Phe Arg Asp Leu Ser Phe Pro Lys
304         40                  45                  50
305 Leu Ile Met Ile Thr Asp Tyr Leu Leu Leu Phe Arg Val Tyr Gly Leu
306         55                  60                  65
307 Glu Ser Leu Lys Asp Leu Phe Pro Asn Leu Thr Val Ile Arg Gly Ser
308 70                  75                  80                  85
309 Arg Leu Phe Phe Asn Tyr Ala Leu Val Ile Phe Glu Met Val His Leu
310                 90                  95                  100
311 Lys Glu Leu Gly Leu Tyr Asn Leu Met Asn Ile Thr Arg Gly Ser Val
312                 105                 110                 115
313 Arg Ile Glu Lys Asn Asn Glu Leu Cys Tyr Leu Ala Thr Ile Asp Trp
314                 120                 125                 130
315 Ser Arg Ile Leu Asp Ser Val Glu Asp Asn His Ile Val Leu Asn Lys
316         135                 140                 145
317 Asp Asp Asn Glu Glu Cys Gly Asp Ile Cys Pro Gly Thr Ala Lys Gly
```

VERIFICATION SUMMARY   DATE: 11/03/2005
PATENT APPLICATION: US/10/554,561   TIME: 08:31:05

Input Set : A:\082368-006600US.txt
Output Set: N:\CRF4\11032005\J554561.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:38 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1
L:41 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1